

# Pseudoangiomatous Stromal Hyperplasia

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## Case Presentation

### 55yo postmenopausal female

- Routine MXR showed microcalcifications in the 11 o'clock position of the right breast
- Asymptomatic
- No risk factors for breast cancer

**PMH:** HTN, Fibrocystic disease

**PSH:** Left breast mass excision via needle localization

**Meds:** HCTZ

**ALL:** NKDA

**SH:** no tobacco, alcohol or IVU

### PE

- 98F, 72, 16, 130/74

Breast: No palpable masses, skin changes, nipple discharge or axillary LAD bilaterally

**Plan:** OR for excisional biopsy via needle localization

**PATH:** 1x1x0.8cm mass

- ***Pseudoangiomatous stromal hyperplasia (PASH).***
- Fibrocystic changes (sclerosing adenosis and stromal fibrosis)
- Microcalcifications seen in benign ducts.
- Margins of resection unremarkable.



# Definition

- Localized overgrowth of mammary fibroblasts and myofibroblasts that occurs almost exclusively in premenopausal women as a painless, palpable intramammary mass
- Clinicopathologic spectrum
  - extending from focal minor microscopic changes to cases in which it produces breast lumps
- Etiology is unknown





# Pathogenesis

- Premenopausal women
- Gynecomastia
- Can occur as:
  - an isolated mass or may coexist with any breast lesion
  - unilateral
- Responsiveness of mammary myofibroblasts → Stromal hyperplasia
- Hormonally mediated
- Progesterone(PR)
  - PR receptors expressed by myofibroblast nuclei





# Presentation

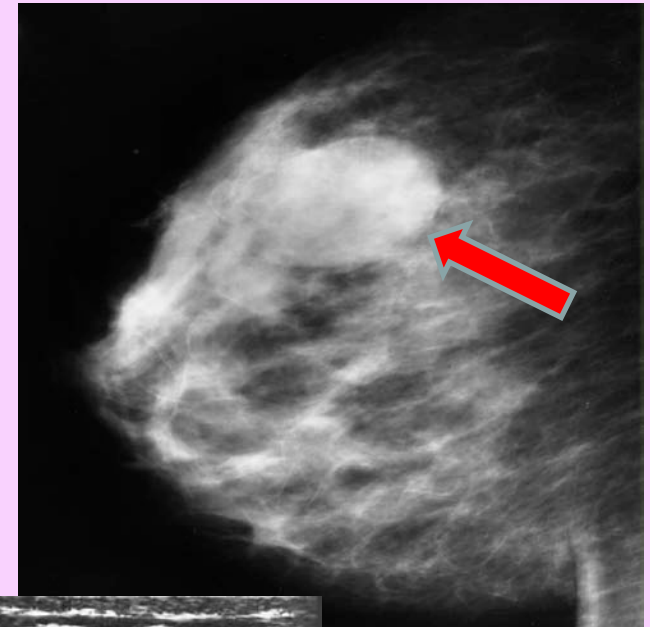
- Slow growing breast mass
  - Firm, solitary
  - Painless, mobile
- DDx: Fibroadenoma, low-grade **angiosarcoma**, myofibroblastoma, and mammary hamartoma.





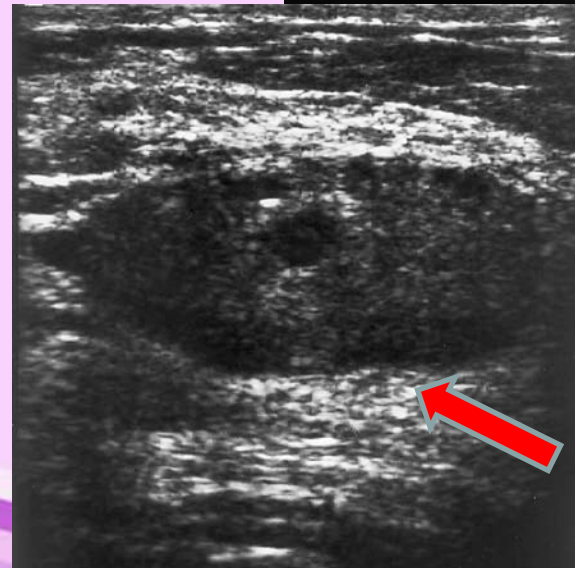
## Mammography

- Well-circumscribed soft tissue mass without calcification
- no obvious regions of fat density



## Ultrasound

- solid, well-defined, hypoechoic mass





# Diagnosis

- Fine-needle aspiration nor Cytology helpful
- Image guided core biopsy
  - 83% sensitive





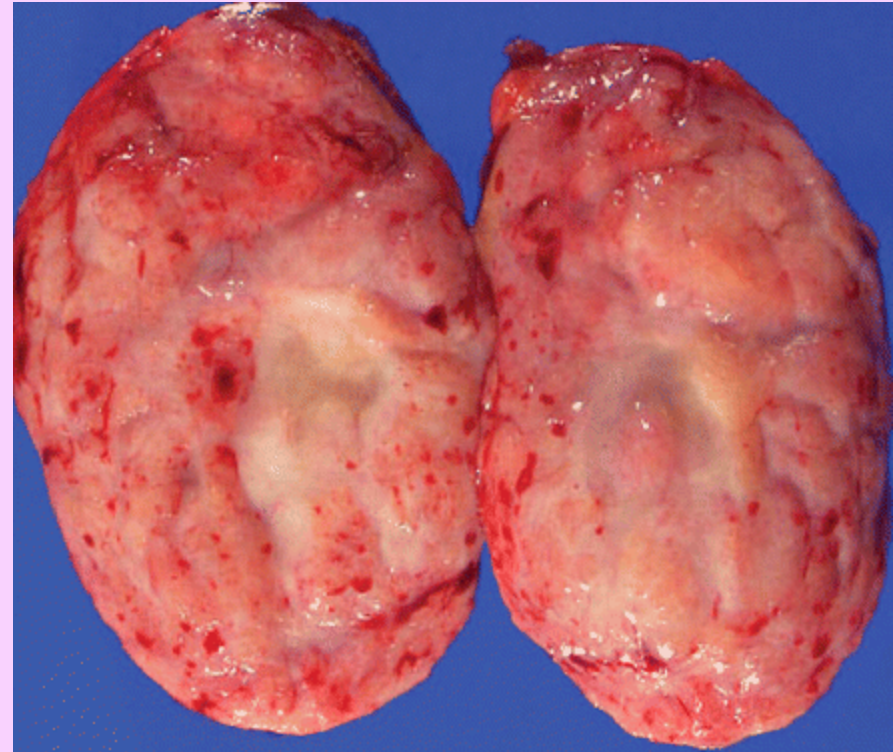


# Pathology

## Gross

- Well-circumscribed
- Smooth
- Rubbery
- +/- capsule

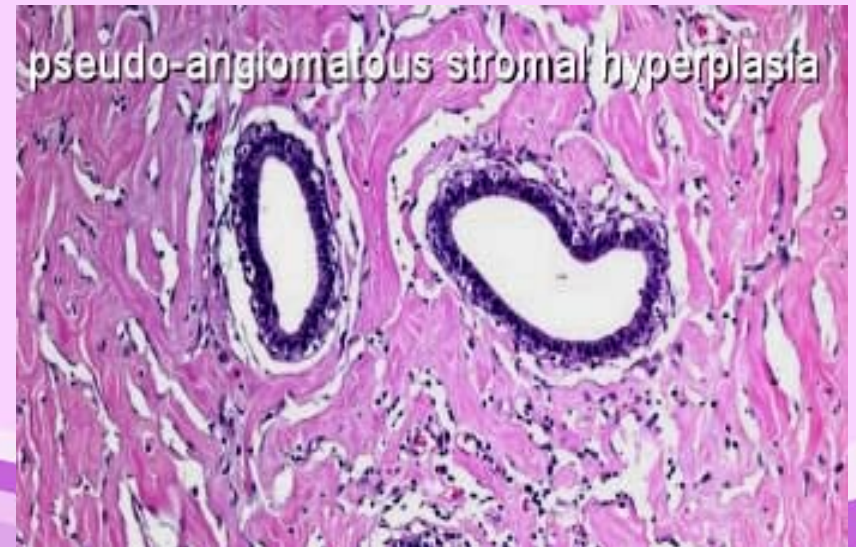
Homogenous, solid lesion





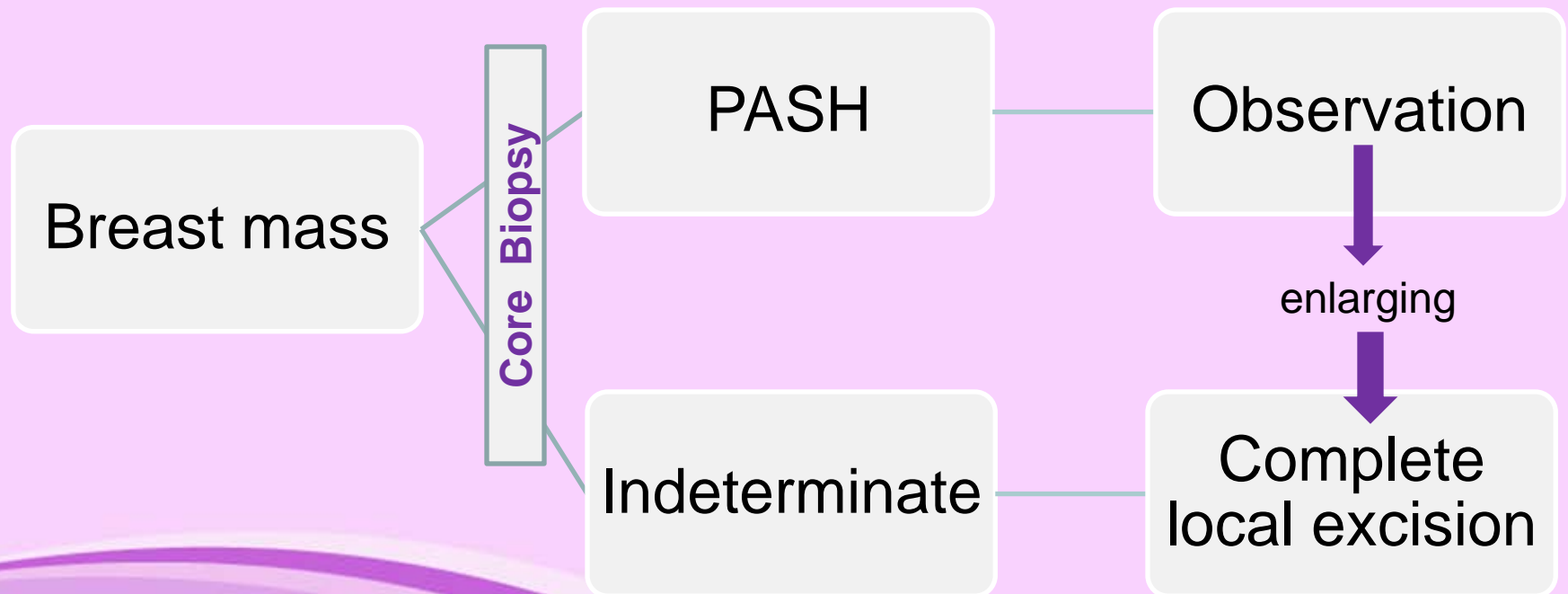
## Microscopically

- Dense fibrous stroma
- Complex channels
  - Irregular, empty, open, or slit-shaped
- Cells are discontinuous, flat, and without nuclear atypia
- Immunohistochemical analysis reveals a stroma that is uniformly positive for the CD34 antibody.





# Clinical Implications





# Conclusions

- Hyperplasia of the mammary stroma
- Possible hormonal etiology
- Spectrum of disease
- Increased awareness
  - can coexist with malignancy
- Benign
- Does not increase the risk of Breast CA



# Question 1

PASH occurs because

- A) Hyperplasia of fat
- B) Overexpression of androgen receptors
- C) Hyperplasia of glands
- D) Hyperplasia of myofibroblasts and fibroblasts

## Question 2

The best way to diagnose PASH is

- A) FNA
- B) Core needle biopsy
- C) Complete excision
- D) X-ray vision

## Question 3

PASH

- A) Mimics other benign diseases
- B) Mimics cancer
- C) Requires mastectomy if diffuse
- D) All of the above
- E) None of the above

## Question 4

PASH is

- A) Malignant
- B) Benign
- C) A rock band



# References

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